Subject Index to Volume 11

A

Acetylcholine receptor synthesis, relationship to [Ca²⁺]_i
(Fura-2 method), 371

ACTH-stimulated lipolysis in rat adipocytes endotoxicosis modulates, 405

Adenosine agonist cyclohexyladenosine

effect on platelet activating factor-induced increases in [Ca²⁺], in human platelets, 647 Adenylate cyclase activity

feedback inhibition in pituitary derived GH₃ cells, 299 Adipocytes (rat), lipolysis in

modulated by endotoxicosis, 405 Adrenal chromaffin cells (bovine)

sodium-dependent Ca²⁺ influx, 573 Aldosterone influences intracellular calcium in human

mononuclear leukocytes in vitro, 565 Amylase secretion, calcium-evoked

diacylglycerol regulation of (pancreatic acinar cells), 501

Anesthetics, volatile, induce transient increases of intracellular Ca²⁺ in rat hepatocytes, 515

Anion transport blockers, organic Fura-2, inhibition of, sequestration and secretion, 57

Aortic constricted rats influence of ischemia on [Ca²⁺]_i transients, 431

ATPase inhibitors carbodiimides, nonpolar & polar, effects of Ca²⁺

and calmodulin on, 275 thapsigargin & calcium efflux in parotid acinar cells, 11 Axoplasmic protein (Myxicola)

calcium-binding properties, 459

C

C-cells & regulation of cytosolic calcium, 323

Caffeine induced [³H]-noradrenaline release promoted by depolarization in calcium-free solution from peripheral sympathetic nerves, 557

Calbindin D-28k, calcium-binding protein, monoclonal

antibodies directed against, 599

Calibration (intracellular) of the fluorescent calcium indicator Fura-2, 75

indicator Fura-2, 75

Calmodulin & Ca²⁺ effects on the inhibition of Ca²⁺+Mg²⁺-ATPase by carbodiimides, 275

Calmodulin-mediated potentiation of chloride channel activity in *Xenopus* oocytes injected with rat brain mRNA, 309

Capacitative calcium entry revisited (Review Article), 611 Carbodiimides

inhibition of Ca²⁺+Mg²⁺-ATPase in erythrocyte ghost membranes, 275

Cardiac Ca2+ channels

taurine modulates ion influx, 251

Cardiac myocytes

fast Fura-2 technique for [Ca²⁺]_i transients, 385

Cardiolipid vesicles

S-100b protein regulates aggregation and fusion of, 35 Cell shape changes & increased [Ca²⁺]_i induced by growth factors, 201

Charge-coupled device imaging of rapid transients in cultured arterial smooth muscle cells, 131

Chemotaxis in neutrophils, 181

Chloride channel activity in *Xenopus* cocytes injected with rat brain mRNA

calmodulin-mediated potentiation of, 309

Chlortetracycline, optical response of the indicator, to membrane potential, 425

Cholera toxin & its B subunit

cytosolic free Ca2+ concentration, 419

Chondrocytes, growth plate (avian), 445

Ciliary electromotor coupling

messenger role of calcium, 665

Confocal imaging of ionised calcium in living plant cells, 291

Confocal microscopy (real-time) & Ca²⁺ measurements in heart muscle cells, 121

Cyclic AMP & Ca²⁺ in up-regulation of 1,25-dihydroxyvitamin D₃ receptor in osteoclast cell line, 281 Cyclic GMP regulates free cytosolic calcium in the pancreatic acinar cell, 477

Cyclic nucleotide dependent protein kinases effects on endoplasmic reticulum Ca²⁺ pump of bovine pulmonary artery, 261

Cyclohexyladenosine, adenosine agonist effect on PAF-induced increases in [Ca²⁺]_i in human platelets, 647

Cytosolic calcium

solic calcium

cell shape changes & increased [Ca²⁺]_i, 201

changes during chemotaxis and phagocytosis

in neutrophils, 181

concentrations in avian growth plate chondrocytes, 445

effects of glucose on, in pancreatic islets, 603

measurements using Fura-2, 63

regulation of extracellular Ca²⁺, role of, 323

regulation & monoclonal antiparathyroid antibodies, 329

D

Diacylglycerol regulation of calcium-evoked amylase secretion from intact and permeabilized pancreatic acinar cells, 501

Digital imaging microscopy & Fura-2 [Ca²⁺]_i in arterial smooth muscle cells, 221 Dopamine

regulation of [Ca²⁺]_i in MMQ pituitary cells, 525 Dynamic ratio imaging system

calcium currents in, 707

practical design criteria, 93 Dynamics in neuronal growth cones, 233 Dystrophic human skeletal muscle

E

Efflux of Ca2+

glucose effects on (pancreatic islets), 603 thyroid hormone effects, 343

Electrical activity of pancreatic β-cells glucose induced temperature-dependent oscillations in cytoplasmic Ca²⁺, 413

Electromotor coupling, ciliary messenger role of calcium, 665

Endoplasmic reticulum Ca²⁺ pump of pulmonary artery effects of cyclic nucleotide dependent protein kinases on, 261

Endothelial cells, histamine stimulated imaging cytoplasmic free calcium, 241

Endotoxicosis modulates cytosolic free calcium and basal and ACTH-stimulated lipolysis in rat adipocytes, 405 Erythrocyte ghost membranes

calmodulin & Ca²⁺ effects on the inhibition of Ca²⁺+Mg²⁺-ATPase by carbodiimides, 275

Emanol protects the heart against the calcium paradox injury, 47

Extracellular calcium

control of renin secretion, 339
regulation by (Workshop), 319-342
regulation of intracellular calcium and cell function, 319
sphingosine-induced increase in inositol phosphate in

parotid acinar cells is dependent on, 469 Extracellular ions

> modulation of free Ca oscillations in single hepatocytes, 353 regulation of cytosolic calcium in C-cells and

parathyroid cells, 323

f-met-leu-phe stimulated neurophils imaging cytoplasmic free calcium, 241 Feedback inhibition of adenylate cyclase activity

pituitary derived GH₃ cells, 299 Fura-2

-2 [Ca²⁺]_i relationship to acetylcholine receptor synthesis, 371 digital imaging microscopy, 221 fast technique for [Ca²⁺]_i transient measurements in cardiac myocytes, 385 inhibition of sequestration and secretion with organic

anion transport blockers, 57 intracellular calibration, 75

measurements of cytosolic free calcium, assessment of, 63

G

Glucose

effects on Ca²⁺ outflow & cytosolic concentration and insulin release from cultured adult rat islets, 603 induces temperature-dependent oscillations in cytoplasmic Ca²⁺ in single pancreatic β-cells related to their electrical activity, 405

Growth cones (neuronal) Ca²⁺ dynamics, 233

Growth factors induce cell shape changes & increased [Ca²⁺]i, 201

Growth plate (avian) chondrocytes, cytosolic free calcium concentrations in, 445

H

Hepatocytes

extracellular ion modulation of free Ca oscillations, 353 volatile anesthetics induce transient increases of intracellular Ca²⁺, 515

Histamine stimulated neutrophils

fluorescence microscope, 121

imaging cytoplasmic free calcium, 241

receptor-mediated function, 269

1

Imaging of cell calcium (Special Issue), 55-249
charge-coupled device for imaging rapid transients, 131
cytoplasmic free calcium in histamine stimulated
endothelial cells & in f-met-leu-phe stimulated
neutrophils, 241
dynamic ratio system, practical design criteria, 93
dynamics during signal transduction, 145
high temporal resolution video, 111
high temporal & spatial resolution, development of

image intensification & spatial distribution of release in single muscle fibres from Balanus nubilus, 211 quantitative, using laser-scanning confocal microscopy, 589 theoretical and practical issues in single living cells, 157

Indo-1 for intracellular Ca2+ measurement in substrate-attached cells

advantages and special considerations, 487

Influx calcium

activated by emptying the inositol trisphosphate sensitive Ca²⁺ pool in T cells, 641 capacitative model (Review Article), 611 inositol trisphosphate sensitive Ca²⁺ pool entry in T cells, activated by, 641 rate, the role of increased calcium in receptor-mediated

function of differentiating HL-60 cells, 269 through cardiac Ca²⁺ channels modulated by taurine, 251 Insulin-binding, high-affinity, modulation by Ca Insulin receptor-effector coupling, modulation by Ca2+, 547 Insulin release

human fetal pancreas, role of calcium in, 1 pancreatic islets, glucose effects on, 603

Intracellular Ca2+ aldosterone influences on (human mononuclear

leukocytes), 565 force development in twitch contraction of mammalian myocardium, related to, 531

Fura-2 & digital imaging microscopy, 221

imaging, quantitative, using laser-scanning confocal microscopy, 589

rise induced by ionomycin & suppressed by lipoxygenase inhibitors in rat thymocytes, 539

transient increases of, induced by volatile anaesthetics in rat hepatocytes, 515

Intracellular Fura-2 fluorescence alteration by viscosity, 85 Ionomycin induced rise in intracellular calcium suppressed by lipoxygenase inhibitors, 539

Ischemia, influence on [Ca2+], transients following drug-therapy, 431

Leukocytes (human mononuclear) aldosterone influence on intracellular calcium, 565 Lipolysis in rat adipocytes endotoxicosis modulates, 405

Lipoxygenase inhibitors suppress intracellular calcium rise induced by ionomycin in rat thymocytes, 539

Liver

calcium sequestration, 625 microsomal Ca2+ sequestration, effects of Mg2+, 397

M

Membrane potential

optical response of the indicator chlortetracycline, 425 Messenger role of calcium in ciliary electromotor coupling, 665

Mg2+ effects on rat liver microsomal Ca2+ sequestration, 397

digital imaging, 221

laser-scanning confocal, for quantitative calcium imaging, 589

real-time confocal, 121

Monoclonal antibodies directed against the calcium binding protein Calbindin D-28k, 599

Monoclonal antibody recognition of parvalbumin Ca²⁺-binding site, 19

Monoclonal antiparathyroid antibodies

tools for studies of regulation of cytoplasmic calcium, 329 Muscle cells

[Ca²⁺] measured using Fura-2 & digital imaging microscopy (arterial smooth), 221

[Ca2+] measurement with Fura-2, acetylcholine receptor synthesis (BC3H-1 cells), 371

dystrophic human skeletal, calcium currents in, 707 imaging of rapid transients, using charge-coupled device (arterial smooth), 131

real-time confocal microscopy & Ca2+ measurements (heart), 121

thyroid hormone on efflux and transport of Ca2+ (rat skeletal),343

whole cell patch-clamped studies of phenytoin inhibition of calcium currents (cardiac and skeletal), 581

Muscle fibres from Balanus nubilus

image intensification for imaging spatial distribution of release, 211

Myocardium (mammalian), force development in twitch contraction of related to intracellular calcium, 531

Na⁺/Ca²⁺ exchange

Quin-2 effect in rat brain synaptosomes, 25

Neuroendocrine and neuronal cells

Ca2+ channels and intracellular stores, 191

Neurofilament proteins (Myxicola) Ca2+binding by, 361

Neuronal and neuroendocrine cells

Ca2+ channels and intracellular stores, 191

Neuronal growth cones Ca²⁺ dynamics, 233

Neutrophils

changes in cytosolic free calcium during chemotaxis and phagocytosis, 181

f-met-Leu-Phe stimulated, imaging cytoplasmic free calcium, 241

oxidase activation via Ca2+ signal, 655

Noradrenaline release, induced by caffeine & promoted by depolarization, in calcium-free solution from peripheral sympathetic nerves, 557

Oocytes (Xenopus)

calmodulin-mediated potentiation of chloride channel activity, 309

Osteoclast cell line

1,25-dihydroxyvitamin D3 receptor up-regulation cAMP & Ca2+, role of, 281

Oxidase activation in individual neutrophils is dependent on the onset and magnitude of the Ca2+ signal, 655

P

Pancreas (human fetal)

insulin release, role of calcium in, 1

Pancreatic 8-cells

glucose induced temperature-dependent oscillations of cytoplasmic Ca2+, 413

Pancreatic acinar cells

cGMP regulates free cytosolic calcium, 477 diacylglycerol regulation of calcium-evoked amylase secretion, 501

Pancreatic islets

effects of glucose on Ca2+ and insulin release, 603

Paradox injury, calcium

ethanol protection of heart from, 47

Parathyroid

cells, regulation of cytosolic calcium, 323

function regulation by monoclonal antiparathyroid antibodies, 329

hormone secretion, control of Ca2+-sensing second messengers, 333

Parotid acinar cells

plasma membrane, calcium efflux across, 11 sphingosine increases inositol phosphate, 469

Parvalbumin (carp)

monoclonal antibody to Ca2+-binding site, 19

Phagocytosis in neutrophils, 181

Phenytoin preferentially inhibits L-type calcium currents in whole-cell patch-clamped cardiac and skeletal muscles, 581

Pituitary cells (MMQ) regulation of [Ca²⁺]_i by dopamine and protein kinase C, 525

Pituitary derived GH3 cells

feedback inhibition of adenylate cyclase activity, 299 Plant cells

confocal imaging of Ca2+ in, 291

Platelets (human)

adenosine agonist effects on PAF-induced [Ca2+]i increases, 647

Practical design criteria for a dynamic ratio imaging system, 93

Protein kinase C

regulation of [Ca²⁺]_i in MMQ pituitary cells, 525 sphingosine increases inositol phosphate in parotid acinar cells, independent of, 469

Pulmonary artery (bovine)

effects of cyclic nucleotide dependent protein kinases on endoplasmic reticulum Ca2+ pump, 261

Quin-2 effect on Ca2+ uptake and efflux in rat brain synaptosomes, 25

R

Receptor

activation & calcium efflux in parotid acinar cells, 11 for 1,25-dihydroxyvitamin D3, heterologous up-regulation, 281

Receptor-mediated function of HL-60 cells, influx rate, 269 Regulation by extracellular Ca²⁺ (Workshop), 319-342 Renin secretion, control of, by extracellular calcium, 339

S-100b protein regulates aggregation and fusion of cardiolipin vesicles, 35

Second messengers

control of parathyroid hormone secretion, 333 Sequestration of calcium in the liver (Review Article), 625 Signal transduction

imaging of [Ca²⁺]_i dynamics during, 145

Single living cells

imaging of Ca2+ in, 157

Sodium-dependent Ca2+ influx in bovine adrenal chromaffin cells, 573

Sphingosine increases inositol trisphosphate in rat parotid acinar cells extracellular calcium dependent & protein kinase C

independent, 469 Substrate-attached cells

intracellular Ca2+ measurement with Indo-1, 487

Sympathetic nerves (peripheral), solution from

caffeine induced [3H]-noradrenaline release promoted by depolarization, 557

Synaptosomes (rat brain)

effect of Quin-2 on Ca2+ uptake and efflux, 25

Taurine modulates ion influx through cardiac Ca2+

channels, 251
T cells, Ca²⁺ entry activated by emptying the inositol trisphosphate sensitive Ca2+ pool, 641

Thapsigargin

calcium efflux in parotid acinar cells, 11

Thymocytes (rat)

lipoxygenase inhibitors suppress intracellular calcium rise induced by ionomycin, 539

Thyroid hormone on efflux and transport of Ca2+ in rat skeletal muscle, 343

Transients of [Ca2+]

influence of ischemia on, 431

Video imaging of intracellular calcium high temporal resolution, 111

Viscosity & intracellular Fura-2 fluorescence a simple correction, 85

Vitamin D₃ receptor up-regulation in an osteoclast cell line cAMP & Ca2+, 281

Author Index to Volume 11

Åkerström G, 329 Abercrombie RF, 361, 459 Al-Baldawi NF, 361, 445 Amati S, 35 Arias Pulido H, 539 Ashley CC, 211 Astashkin EI, 419 Auffermann W, 47 Aviram A, 269 Azuma J, 251

B

Baier W, 599 Bals S, 385 Bechem M, 385 Becker PL, 157 Beeler T, 425 Berlin JR, 371 Bezuglov VV, 539 Birkenhäger JC, 281 Blanco P, 25 Blaustein MP, 221 Bloch RJ, 371 Bogónez E, 25 Bois P, 581 Bordin S, 603 Boschero AC, 603 Bosshard HR, 19 Bova S, 221 Bowden CL, 647 Boyajian CL, 299 Brown EM, 333 Buurman CJ, 281

C

Campbell AK, 655 Cannell MB, 371 Carafoli E, 319 Casteels R, 261 Caterson ID, 547 Celio MR, 599 Chen CJ, 333 Chow SC, 641 Cobbold PH, 353 Cody SH, 291 Cognard C, 507, 581 Cohan C, 233 Connor JA, 233 Cooney GJ, 547 Cooper DMF, 299 Curatola G. 35 Cuthbertson KSR, 353

I

Davies EV, 655 Deaciuc IV, 405 de Viragh PA, 599 Di Virgilio F, 57 Dixon CJ, 353 Doi E, 309 Donato R, 35 Duport G, 507

Cuvelier BS, 647

E

Eggermont JA, 261 El-Hajj G, 333 Everts ME, 343

F

Fajtova V, 333 Famulski KS, 275 Fasolato C, 191 Fay FS, 55, 75, 157 Ferris D, 201 Fink L, 233 Fogarty KE, 157 Fray JCS, 339 Furuyama S, 469

Gehring CA, 291

Giambanco I, 35

G

Godber JF, 211 Goldman WF, 221 Grapengiesser E, 413 Gregersen HJ, 599 Gross DJ, 131 Gruenstein E, 487 Guidolin D, 191 Gukovskaya AS, 419, 539 Gunter KK, 445 Gunter TE, 445 Gwathmey JK, 531 Gylfe E, 329, 413

H

Hajjar RJ, 531 Hallett MB, 655 Harootunian AT, 93 Harris LJ, 131 Harris PJ, 291 Heipel C, 413 Heizmann CW, 19 Heliman B, 413 Herchuelz A, 603 Herman B, 63

I

Iaizzo PA, 515

J

Jackson J, 361 Jacob R, 241 Javors MA, 647 Jondal M, 641 Judd AM, 525 Juhlin C, 329

K

Kaneko S, 309 Kao L-S, 573 Käsmayr J, 565 Kater SB, 233 Kifor O, 333 Kishimoto S, 251 Klareskog L, 329 Komabayashi T, 501 Kraus-Friedmann N, 397, 625 Kuan S-I, 525

L

Lazarev AV, 419 Leboff MS, 333 Lebrun P, 603 Lederer WJ, 121, 371 Lemasters JJ, 63 Linderman JJ, 131 Liu M, 647 Liu P-S, 573 Login IS, 525 Lucherini MJ, 487

M

MacLoed RM, 525
Machemer H, 665
Magyar K, 557
Malgaroli A, 191
Marks PW, 181
Martínez-Serrano A, 25
Maxfield FR, 181
McKinney JS, 501
Meade-Cobun K, 201
Meldolesi J, 191
Mikhna MG, 419
Millani D, 191
Millard PJ, 145
Mogami Y, 665

Moore EDW, 157

N

Nemeth EF, 319, 323 Niggli E, 121 Nikolaeva IS, 419 Nomura Y, 309 Norman AW, 599

0

Oertle M, 19 Olsen RA, 515 Osgerby KJ, 1

P

Paffhausen, 385
Pandol SJ, 477
Panten U, 413
Parish RW, 291
Parmley WW, 47, 431
Pernberg J, 665
Petrunyaka VV, 539
Pikula S, 275
Poenie M, 85
Pols HAP, 281
Pott L, 385
Powis G, 515
Pozzan T, 191
Putney Jr JW, 11, 611
Puzas JE, 445

R

Raeymaekers L, 261 Rask L, 329 Rastad J, 329 Raymond G, 507, 581 Rephaeli A, 269 Rideau Y, 507 Rivet M, 507, 581 Roe MW, 63 Rosier RN, 445 Rubin LT, 333 Rubin RP, 501 Ryan TA, 145

S

Sada H, 251 Satrústegui J, 25 Sawamura A, 251 Schärer L, 599 Schilte JP, 281 Schoeffield-Payne MS, 477 Schwanstecher C, 413 Seewald MJ, 515 Shaklai M, 269 Silverstein SC, 57 Skaper SD, 191 Slakey LL, 131 Sperelakis N, 251 Spitzer JA, 405 Steinberg TH, 57 Stier A, 515 Sugiya H, 469 Surin AM, 419

T

Takamatsu T, 111
Takemura H, 11
Tang S, 425
Thastrup O, 11
Theisen K, 565
Timmerman MP, 211
Tinner R, 19
Török TL, 557
Töth PT, 557
Tsien RY, 93
Tuch BE, 1
Tucker RW, 201
Turtle JR, 1, 547

v

Van Dyke RA, 515 van Leeuwen JPTM, 281

W

Wagner S. 431 Wahl M. 487 Walton A, 211 Watanabe H, 309 Webb WW, 145 Wehling M, 565 Wier WG, 111 Wikman-Coffelt J, 47, 431 Williams DA, 55, 75, 157, 291, 589 Williams PF, 547 Wojtczak AB, 275 Woods NM, 353 Wozniak MA, 371 Wrzosek A, 275 Wu ST, 47, 431 Wuytack F, 261

Z

Zhang GH, 397 Zilkens RR, 547 Zinchenko VP, 539 Zolese G, 35 Zuscik MJ, 445

